

## AMENDMENTS TO THE CLAIMS

1    1. (Currently Amended) A method for lock management, the method comprising the  
2    steps of:  
3       a first requester transmitting to a lock management system a first request for a  
4       particular lock on a resource;  
5       wherein said lock management system manages locks on resources that ~~are~~may be  
6       granted to a plurality of processes ~~to~~that can access said resource;  
7       ~~determining said first request cannot be honored because of a blocking condition;~~  
8       ~~in response to determining said first request cannot be honored:~~  
9       ~~creating first data that indicates the blocking condition; and~~  
10      ~~after creating said first data:~~  
11      ~~storing in a store, as a new item of data in the store, said first data, and~~  
12      ~~transmitting~~receiving a message from said lock management system ~~a message~~ that  
13      indicates that said first request ~~to look for a particular lock on~~ a resource is  
14      denied;  
15  
16      wherein a blocking condition caused the denial of said first requester receiving said  
17      message from said lock management system;request;  
18      wherein said message includes said first data; and  
19      wherein said first data identifies another resource, wherein said lock management  
20      system will not grant another lock for said another resource while said  
21      blocking condition is in effect; and  
22      based on said first data, said first requester transmitting a second request for obtaining  
23      notification that indicates of when said blocking condition should no longer  
24      cause denial of a request, wherein obtaining notification includes transmitting  
25      a request for a lock on for said another resource.

1    2. (Original) The method of claim 1, wherein no process of said plurality of processes  
2       holds a lock issued by said lock management system for said resource.

1    3. (Currently Amended) The method of claim 1, wherein ~~the steps further include:~~  
2       obtaining notification includes said first requester receiving said notification; and  
3       the steps further include: in response to receiving said notification, said first  
4           requester transmitting another request to said lock management system for  
5           said particular lock on said resource.

1    4. (Original) The method of claim 3, wherein the step of said first requester transmitting  
2       another request includes transmitting second data that indicates that said blocking  
3       condition should no longer cause denial of a request for said lock of said resource.

1    5. (Original) The method of claim 4, wherein the steps further include said lock  
2       management system processing said other request without denial based on said  
3       second data.

1    6. (Canceled)

1    7. (Original) The method of claim 1, wherein:  
2       said first requester is a process of said plurality of processes;  
3       wherein said resource is a data block in a b-tree index; and  
4       wherein a second process of said plurality of processes is performing a block split  
5           operation on said data block.

1    8. (Withdrawn) A method of managing locks by a distributed lock management system,  
2       the method comprising the steps of:  
3       a first lock manager on a first node receiving a first request for a first lock on a  
4           resource from a first requester;  
5       wherein said distributed lock management system includes said first lock manager;

6       determining that said first request may not be granted because of a blocking  
7              condition;  
8        said first lock manager storing in a data structure first data that may be used by said  
9              first requester to obtain notification that said blocking condition should no  
10             longer cause denial of a request for a lock on said resource; and  
11        said first lock manager transmitting to said first requester a first response that:  
12             indicates that said first request is denied, and  
13             includes a copy of said first data.

1       9. (Withdrawn) The method of claim 8, wherein the steps include:  
2             receiving a message that indicates that said blocking condition should no longer cause  
3             denial of a request for a lock on said resource; and  
4             modifying said data structure to indicate that said blocking condition should no longer  
5             cause denial of a request for a lock on said resource.

1       10. (Withdrawn) The method of claim 9, wherein the step of receiving said message  
2             includes receiving said message from said first requester.

1       11. (Withdrawn) The method of claim 8, wherein:  
2             the steps further include said first lock manager transmitting to another lock manager  
3             of said distributed lock management system a message requesting said first  
4             lock on said resource; and  
5             wherein the step of determining is based on a second response received from said  
6             other lock manager indicating that said first request cannot be granted;  
7             wherein said second response includes a copy of said first data.

1       12. (Withdrawn) The method of claim 8, wherein the steps further include:

2 receiving a second request for another lock on said resource;  
3 determining, based on said first data, that said second request may not be granted;  
4 said first lock manager transmitting to said second requester another response that:  
5 indicates that said second request is not granted, and  
6 includes a copy of said first data.

1 13. (Withdrawn) The method of claim 12, wherein:  
2 said first lock manager is a master of said resource; and  
3 wherein the step of receiving said second request includes receiving said second  
4 request from another lock manager.

1 14. (Withdrawn) The method of claim 12, wherein:  
2 said first lock manager and a process are on a node, wherein said process is different  
3 than said first requester; and  
4 the step of receiving said second request includes receiving said second request from  
5 said process.

1 15. (Withdrawn) The method of claim 8, wherein:  
2 said distributed lock management system includes a master for said resource; and  
3 wherein no lock is currently granted for said resource by said master.

1 16. (Currently Amended) A computer-readable medium carrying one or more sequences  
2 of instructions for lock management, wherein execution of the one or more sequences  
3 of instructions by one or more processors causes the one or more processors to  
4 perform the steps of:  
5 a first requester transmitting to a lock management system a first request for a  
6 particular lock on a resource;

7       wherein said lock management system manages locks on resources that aremay be  
8               granted to a plurality of processes ~~to~~that can access said resource;  
9       determining ~~said first request cannot be honored because of a blocking condition;~~  
10      ~~in response to determining said first request cannot be honored;~~  
11      ~~creating first data that indicates the blocking condition; and~~  
12      ~~after creating said first data;~~  
13               ~~storing in a store, as a new item of data in the store, said first data, and~~  
14      transmitting~~receiving a message from said lock management system-a message that~~  
15      indicates that said first request to lock a resource is denied;  
16  
17      wherein a blocking condition caused the denial of said first requester receiving said  
18      message from said lock management system;request;  
19      wherein said message includes said first data;  
20      wherein said first data indicates another resource for which another lock may be  
21      requested, wherein said lock management system does not grant said lock  
22      while said block condition is in effect; and  
23      based on said first data, said first requester transmitting a second request for a  
24      notification that ~~indicates when~~ said blocking condition should no longer  
25      cause denial of a request for a lock on said resource.  
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- 1      17. (Original) The computer-readable medium of claim 16, wherein no process of said
- 2      plurality of processes holds a lock issued by said lock management system for said
- 3      resource.
- 1      18. (Currently Amended) The computer-readable medium of claim 16, wherein ~~the steps~~
- 2      ~~further include:~~
- 3      obtaining notification includes said first requester receiving said notification; and

4           the steps further include: in response to receiving said notification, said first  
5           requester transmitting another request to said lock management system for  
6           said particular lock on said resource.  
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1     19. (Original) The computer-readable medium of claim 18, wherein the step of said first  
2           requester transmitting another request includes transmitting second data that indicates  
3           that said blocking condition should no longer cause denial of a request for said lock  
4           of said resource.

1     20. (Original) The computer-readable medium of claim 19, wherein the steps further  
2           include said lock management system processing said other request without denial  
3           based on said second data.

1     21. (Canceled)

1     22. (Original) The computer-readable medium of claim 16, wherein:  
2           said first requester is a process of said plurality of processes;  
3           wherein said resource is a data block in a b-tree index; and  
4           wherein a second process of said plurality of processes is performing a block split  
5           operation on said data block.

1     23. (Withdrawn) A computer-readable medium carrying one or more sequences of  
2           instructions for managing locks by a distributed lock management system, wherein  
3           execution of the one or more sequences of instructions by one or more processors  
4           causes the one or more processors to perform the steps of:  
5           a first lock manager on a first node receiving a first request for a first lock on a  
6           resource from a first requester;

7       wherein said distributed lock management system includes said first lock manager;  
8       determining that said first request may not be granted because of a blocking  
9              condition;  
10      said first lock manager storing in a data structure first data that may be used by said  
11              first requester to obtain notification that said blocking condition should no  
12              longer cause denial of a request for a lock on said resource; and  
13      said first lock manager transmitting to said first requester a first response that:  
14              indicates that said first request is denied, and  
15              includes a copy of said first data.

1     24. (Withdrawn) The computer-readable medium of claim 23, wherein the steps include:  
2       receiving a message that indicates that said blocking condition should no longer cause  
3              denial of a request for a lock on said resource; and  
4       modifying said data structure to indicate that said blocking condition should no longer  
5              cause denial of a request for a lock on said resource.

1     25. (Withdrawn) The computer-readable medium of claim 24, wherein the step of  
2       receiving said message includes receiving said message from said first requester.

1     26. (Withdrawn) The computer-readable medium of claim 23, wherein:  
2       the steps further include said first lock manager transmitting to another lock manager  
3              of said distributed lock management system a message requesting said first  
4              lock on said resource; and  
5       wherein the step of determining is based on a second response received from said  
6              other lock manager indicating that said first request cannot be granted;  
7       wherein said second response includes a copy of said first data.

1    27. (Withdrawn) The computer-readable medium of claim 23, wherein the steps further  
2        include:  
3            receiving a second request for another lock on said resource;  
4            determining, based on said first data, that said second request may not be granted;  
5            said first lock manager transmitting to said second requester another response that:  
6                  indicates that said second request is not granted, and  
7                  includes a copy of said first data.

1    28. (Withdrawn) The computer-readable medium of claim 27, wherein:  
2        said first lock manager is a master of said resource; and  
3        wherein the step of receiving said second request includes receiving said second  
4            request from another lock manager.

1    29. (Withdrawn) The computer-readable medium of claim 27, wherein:  
2        said first lock manager and a process are on a node, wherein said process is different  
3            than said first requester; and  
4        the step of receiving said second request includes receiving said second request from  
5            said process.

1    30. (Withdrawn) The computer-readable medium of claim 23, wherein:  
2        said distributed lock management system includes a master for said resource; and  
3        wherein no lock is currently granted for said resource by said master.